GSS Funding Request

January 30, 2012

1 Background

The Graduate Student Seminar (GSS) was started several years ago by Wesleyan Graduate Students in an effort to provide the Mathematics and Computer Science graduate students with a forum to discuss mathematics and computer science in a formal, but slightly less intimidating, setting. The general format of this seminar includes a fifty minute talk by one graduate student followed by a ten minute discussion/question period. Traditionally, the audience is comprised of only graduate students; however, speakers are free to invite any faculty members or undergraduates as guests if they so desire. In the past, lunch has been provided by the department for seminar attendees.

2 Purpose of GSS

These meetings are an opportunity for graduate students to share their research with one another, or discuss mathematical topics of general interest. It is of great benefit to the speaker to have the opportunity to prepare and deliver a talk for a group of peers. In the past, students have taken this opportunity to

- Practice talks to be delivered to Wesleyan faculty such as: seminars, oral qualifiers, and thesis/dissertation defenses.
- Inform fellow graduate students of their area of research.
- Present fundamental concepts not recently offered by topics courses (in the past, this has included aspects of generalized cohomology theories, (quasi)conformal mappings, Lie Groups, and theoretical computer science).
- Practice future job and conference talks.

Having high attendance at these seminars yields increased collaboration amongst graduate students, increased feedback to help the speaker improve, and an overall higher level of mathematical understanding. Potential graduate students find this seminar very appealing. The most convenient time for the graduate students to meet for such a seminar is during the lunch hour. It has been our experience that providing lunch at these seminars is a huge draw to the graduate students.

3 Past and Future Talks

At present, there are fewer 5th and 6th year students than any other time in recent memory. First and second year students rarely give talks, particularly when they come into Wesleyan without a masters degree. For this reason, in the Fall 2011 semester we were left with two open slots after all students had been given a chance to speak. To fill these slots, we began an experimental program to exchange seminar slots with the graduate seminars of nearby universities. This resulted in two non-Wesleyan students speaking in the Wesleyan GSS, but in return two Wesleyan students were invited to speak at those universities. In particular, David White spoke at Yale and Gabriel Valenzuela spoke at UMass-Amherst.

This exchange program allows advanced students to practice speaking in a new setting and with an audience of strangers. This skill will be particularly useful when applying for jobs. Furthermore, these students end up with another invited talk to put on their CVs, and also with the potential to find potential collaborators at universities where their work would be unknown otherwise. A vote has been taken, and the GSS would like to continue with this program in the spring semester. If you object to this program, please get in touch with David White.

During the Fall 2011 semester the following talks were presented at GSS. If you would like to see abstracts for last fall's talks please get in touch with David White.

Date	Speaker	Topic
9/8/11	Organizational Meeting	GSS
9/15/11	David White	Bousfield Localization and Monoidal
		Model Categories
9/22/11	Megan Heenehan	Immersions of Complete Graphs
9/29/11	Brett Townsend	Fraisse Limits
10/6/11	Adam Gamzan (UMass Amherst)	Deforming Galois representations and
		Fermat's Last Theorem
10/13/11	Bonita Graham	Constructable Numbers and Origami
10/20/11	Gabriel Valenzuela	Complex Cobordism
10/27/11	Anna Haensch	Almost Universal Quadratic Forms
11/3/11	Tarik Aougab (Yale)	Teichmuller Theory
11/10/11	James Ricci	Hilberts Eleventh Problem: The Hasse
		Principle and Integral Quadratic Forms
11/17/11	Brett Smith	The Mobius Inversion Formula
12/1/11	Sarah Vigliota	A Graph Theoretic Proof of the Jordan
		Curve Theorem
12/8/11	Anna Haensch	Mixed Sums of Squares and Polygonal
		Numbers

During the Spring 2012 semester the following talks will be presented at GSS.

Date	Speaker	Topic
1/26/12	GSS	Organizational Meeting
2/2/12	Anna Haensch	The goals and origins of class field the-
		ory
2/9/12	Brett Townsend	Ordered Abelian Groups
2/16/12	Daniel Kelleher (UConn)	TBD
2/23/12	Brett Smith	A topic in graph theory
3/1/12	David White	A selection of open problems in com-
		puter science
3/8/12	Abbey Bourdon	Nakayama's Lemma
3/29/12	Megan Heenehan	Graph Immersions (practice for Smith
		Colloquium)
4/5/12	Sarah Vigliotta	Fractional Coloring
4/12/12	Leah Karker	Special Topics in Model Theory
4/19/12	James Ricci	TBD
4/26/12	Jingbo Liu	Quadratic Forms
5/3/12	Glenn Henshaw	Quaternion Algebras (practice for PhD
		defense)

As you can see we have already filled every slot. We will also be sending two speakers to UConn and it's possible we'll also be sending speakers to Yale or UMass-Amherst.

4 Proposed Funding

In the past, the department has provided this seminar with lunch. We would like to request funding to purchase lunch for the entirety of this semester. If we order food for 17 students (the average attendance) from Carmine's we are able to feed everyone for an average of \$90 per order. There will be 14 meetings of GSS this semester, this would mean a total cost to the department of \$1180 for the spring semester. It is our belief that a well attended GSS benefits the entire department and leads to an increased overall level of scholarship and teaching.